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EXAMINER

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2618

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Please find below and/or attached an Office communication concerning this application or proceeding.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1,2,4,6,7,12,13,15,17,18,20,21,24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang [WO 00/74275] in view of Jokinen [US 6,266,330].

Regarding claims 1,6,12,17,21,24 Hwang discloses a method of novel system for handoff where a channel construction of a base station is disclosed. Hwang further discloses a base station/a wireless communication apparatus transmitting and receiving data wirelessly, comprising:

- a transmitting portion for transmitting the data through at least one frequency channel. See page 8, lines 18-27
- controller for obtaining a number of transmittable channels of a counterpart wireless communication apparatus that the wireless communication apparatus intends to communicate with (controller 101 processes the messages received on a forward dedicated control channel, the said message related to packet data service i.e. message indicating number of supplemental channels required by the counterpart wireless apparatus), and processing to transmit the data through the transmitting portion according to the obtained number of transmittable channels (the controller 101 enables/disables the individual channel generators and thus assigns/releases supplemental channels). See page 8, lines 18-35.

Hwang, however, does not disclose a method wherein when the counterpart wireless communication apparatus receives the data through one channel, the controller transmits the data through a basic channel.

Jokinen, in the same field of endeavor, discloses a method where data is transmitted on a basic channels and a supplemental channel is assigned only if required. See col. 1, line 55 – col. 2, line 41.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Jokinen to Hwang in order to efficiently utilize the system resources.

Regarding claims 2,13, Hwang discloses the base station/wireless communication apparatus of claim 1, wherein when the counterpart wireless communication apparatus receives the data through a plurality of frequency channels, the controller transmits the data through the plurality of frequency channels to the counterpart wireless communication apparatus (the controller 101 enables/disables the individual channel generators and thus assigns/releases supplemental channels). See page 8, lines 18-35.

Regarding claims 4,7,15,18 Hwang further discloses a method wherein the at least one frequency channel includes a basic channel for supporting a communication with other wireless communication apparatuses having a single channel/fundamental channel, and a plurality of additional channels consecutively or inconsecutively positioned with respect to the basic channel. See page 8, lines 18-35.

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Regarding claim 20, Jokinen further discloses a method wherein, when the data for transmission is real time data, the data is graded into respective grades, and essential data of a basic grade (for example voice communication) for utilization of the real time data is transmitted through the basic channel, and the data of other grades (for example packet switched data) is transmitted through the plurality of additional channels. See col. 1, line 55 – col. 2, line 41.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 3,10,14,23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang [WO 00/74275] and Jokinen [US 6,266,330] in view of Rune [2003/0012173].

Regarding claims 3,10,14, Hwang and Jokinen disclose all the limitations as claimed. However they do not disclose a method wherein, when the wireless communication apparatus is operated as a master, the controller obtains the number of transmittable channels of the counterpart wireless communication apparatus, by performing an inquiry operation with the counterpart wireless communication device. Hwang obtains the number of transmittable channels from the counterpart wireless communication device on a forward-dedicated control channel

Rune, in the same field of endeavor, discloses a method where the base station/wireless communication apparatus polls a slave/counterpart wireless communication device to obtain

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frequency information. See Page 1, paragraphs 6,7,8; summary of invention, page 4, paragraphs 50,52.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Rune to modified Hwang in order to reduce the signaling information and thus efficiently utilize the network resources.

Regarding claim 23, Rune further discloses a method of operating a piconet by configuring the wireless apparatuses in a master/slave environment. See summary of invention.

5. Claims 5,8,16,19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang [WO 00/74275] and Jokinen [US 6,266,330] in view of Bluetooth specifications [XP-002214950].

Regarding claims 5,8,16,19, Hwang and Jokinen disclose all the limitations as claimed.. However they do not disclose a method wherein, while transmitting the data in parallel, the controller applies a frequency-hopping pattern to the plurality of additional channels, corresponding to a frequency-hopping pattern applied to the basic channel.

Bluetooth Specifications teaches a method where the hop frequency applied shall be the hop frequency as applied in the time slot where the packet transmission was started i.e. when applying this teaching to Hwang and Jokinen the hop frequency applied to the basic/fundamental channel at the beginning of the transmission will be applied to the consecutive supplemental channels as well. See section 2.3.

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Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Bluetooth specifications to modified Hwang in order to reduce the interference in the system while accessing frequency channels and thus improve the performance of the system.

6. Claims 9,21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hwang [WO 00/74275] and Jokinen [US 6,266,330] in view of Rinchiuso [US 20020090004].

Regarding claims 9,21, Hwang and Jokinen discloses all the limitations as claimed. However they do not disclose a method wherein, when the data for transmission is real time data, the controller grades the real time data, and transmits essential data of a basic grade for utilization of the real time data through the basic channel, and transmits the data of other grades through the plurality of supplemental channels.

Rinchiuso teaches a method for scheduling and allocating data in a broadband communication system. Rinchiuso further discloses a method where the controller in the base station sets the grade or quality of service (QoS) for the fundamental channel carrying voice traffic and the supplemental channel carrying data traffic independent of each other before transmission. See page 1, paragraph 7.

Therefore it would have been obvious to one with ordinary skill in the art at the time the invention was made to provide the above teachings of Rune to modified Hwang in order to efficiently utilize the system resources and provide high-quality voice services.

Response to Arguments

3. Applicant's arguments filed 5/1/06 have been fully considered but they are not persuasive.

The applicant argues that the secondary reference Jokinen does not disclose or suggest a determination of whether a counterpart wireless communication apparatus receives data through only one channel.

The examiner respectfully disagrees. Firstly, the claim does not recite a determination step to determine whether a counterpart wireless communication apparatus receives data through only one channel. The claim simply recites that when the counterpart wireless communication apparatus receives the data through only one channel, the controller transmits the data through the basic channel.

Secondly, Jokinen in col. 1, line 64 – col. 2, line 15, does teach a method of determining whether the data can be sent in one channel and if it is true then sends the data through the basic channel.

Therefore the rejection of the claims 1-10, 12-21, 23 and 24 as submitted in the previous office action and as discussed above is considered proper.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sujatha Sharma whose telephone number is 571-272-7886. The examiner can normally be reached on Mon-Fri 7.30am - 4.00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew D. Anderson can be reached on 571-272-4177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Sujatha Sharma
June 7, 2006


Matthew D. Anderson
Supervisory Patent Examiner